CLAIMS

1. An odor sensor in which the electric conductivity thereof is varied in response to odor, the odor sensor characterized by comprising:

a mixed material in which β-carotene and a reducing agent to prevent the oxidation of the β-carotene are dispersed in a viscous liquid; and

a cathode electrode and an anode electrode are disposed so as to be in contact with the mixed material.

2. The odor sensor according to claim 1, characterized in that the reducing agent is any of sodium thiosulfate ($Na_2S_2O_3$), hydro nicotinamide adenine dinucleotide phosphate (NADPH), $Na_2(H_2PO_2)$ and L-ascorbic acid.

3. The odor sensor according to claim 1 or 2, characterized in that the viscous liquid is a liquid with high viscosity and polarity.

4. The odor sensor according to claim 3, characterized in that the liquid with high viscosity and polarity is glycerin.

5. The odor sensor according to any one of claims 1 to 4, characterized in that ethanol is further mixed as a viscosity modifier.

6. The odor sensor according to any one of claims 1 to 5, characterized by having a structure in which the mixed material is sandwiched with the cathode electrode and the anode electrode facing each other.

7. The odor sensor according to any one of claims 1 to 6, characterized in that:

the cathode electrode is a copper plate or a platinum plate;

the anode electrode is a mesh-shaped stainless-steel net; and

the cathode electrode and the anode electrode face each other.

8. The odor sensor according to any one of claims 1 to 6, characterized in that:

the cathode electrode is a copper plate or a platinum plate;

the anode electrode is a mesh-shaped platinum net; and

the cathode electrode and the anode electrode face each other.